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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/556,233	02/09/2007	Petra Biehl	C 2774 PCT/US	3701
23657 7590 07/23/2007 COGNIS CORPORATION PATENT DEPARTMENT 300 BROOKSIDE AVENUE AMBLER, PA 19002			EXAMINER CHO, JENNIFER Y	
			ART UNIT 1621	PAPER NUMBER
			MAIL DATE 07/23/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/556,233	BIEHL ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Jennifer Y. Cho	1621	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 February 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 19-42 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 19-42 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/9/05</u> .   | 6) <input type="checkbox"/> Other: _____                          |

### **Detailed Action**

This office action is in response to Applicant's communication filed on 2/9/2007.

Claims 19-42 are pending in this application.

### **IDS**

The information disclosure statement (IDS) filed on 11/9/2005 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

### **Claim Rejections - 35 USC 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

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4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 19-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walele et al. (US 5,959,130), in view Williams et al. (US 3,972,962).

The instant claims are drawn to a method of producing a benzoic acid ester derivative by reacting either benzoic acid or a benzoic acid ester with an alcohol and a catalyst containing tin oxide and phosphorus acid.

Walele et al. teaches a method of producing a benzoic acid ester derivative of a fatty alcohol by reacting benzoic acid, with fatty alcohol derivatives that are both linear and non-linear containing 8-18 carbon atoms, in the presence of a stannous oxalate catalyst (abstract; column 4, lines 45-51; column 6, line 61).

Walele et al. is deficient in the sense that it does not use Applicant's tin oxide and phosphorus acid catalyst. Walele et al. also does not particularly point out Applicant's ethoxylated/propylated fatty alcohols, glycols, pressure, order of addition of the reactants during the heating stages, residual content of benzoic acid and percentages of the catalyst.

Williams et al. teaches the equivalency of stannous oxalate, phosphoric acid, tin oxide, sulfuric acid and sulfonic acids as esterification catalysts (column 4, lines 35-40).

In regards to the limitations for ethoxylated/propylated fatty alcohols, glycols, Applicant's pressure, order of addition of the reactants during the heating stages, residual content of benzoic acid and percentages of the catalyst, it is the position of the examiner that one of ordinary skill in the art, at the time of the invention, would through

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routine and normal experimentation determine the optimization of these limitations to provide the best effective variable depending on the results desired. Thus it would be obvious in the esterification process to optimize the reactants used, the pressure, order of addition of the reactants during the heating stages, residual content of benzoic acid and percentages of the catalyst. The applicant does not show any unusual and/or unexpected results for the limitations stated. Note that the prior art provides the same effect desired by applicant, the synthesis of benzoic acid esters in high yield.

Therefore, it would be prima facie obvious to one of ordinary skill in the art at the time of the invention, to substitute Williams et al.'s phosphoric acid and tin oxide catalyst, for the esterification reaction of Walele et al., while further optimizing Applicant's result-effective variables. Absent any showing of unusual and/or unexpected results over Applicant's particular catalyst and process steps, the art obtains the same effect on the esterification of benzoic acid and its esters. The expected result would be an efficient synthesis of benzoic acid ester for the cosmetic industry.

Claims 19-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eckey (US 2,182,397), in view Williams et al. (US 3,972,962).

The instant claims are drawn to a method of producing a benzoic acid ester derivative by reacting either benzoic acid or a benzoic acid ester with an alcohol and a catalyst containing tin oxide and phosphorus acid.

Eckey teaches a method of producing a benzoic acid ester derivative (page 1, second column, lines 34-36) by reacting benzoic acid (page 2, second column, lines 6-

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7), with fatty alcohol derivatives, which include glycols (page 2, first column, lines 58-59), in the presence of a sulfuric acid or sulfonic acid catalyst (page 2, second column, fourth paragraph down, lines 1-4).

Eckey is deficient in the sense that it does not use Applicant's tin oxide and phosphorus acid catalyst. Eckey also does not particularly point out the use of ethoxylated/propylated fatty alcohols, Applicant's pressure, order of addition of the reactants during the heating stages, residual content of benzoic acid and percentages of the catalyst.

Williams et al. teaches the equivalency of stannous oxalate, phosphoric acid, tin oxide, sulfuric acid and sulfonic acids as esterification catalysts (column 4, lines 35-40).

In regards to the limitations for ethoxylated/propylated fatty alcohols, Applicant's pressure, order of addition of the reactants during the heating stages, residual content of benzoic acid and percentages of the catalyst, it is the position of the examiner that one of ordinary skill in the art, at the time of the invention, would through routine and normal experimentation determine the optimization of these limitations to provide the best effective variable depending on the results desired. Thus it would be obvious in the esterification process to optimize the reactants used, the pressure, order of addition of the reactants during the heating stages, residual content of benzoic acid and percentages of the catalyst. The applicant does not show any unusual and/or unexpected results for the limitations stated. Note that the prior art provides the same effect desired by applicant, the synthesis of benzoic acid esters in high yield.



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Therefore, it would be prima facie obvious to one of ordinary skill in the art at the time of the invention, to substitute Williams et al.'s phosphoric acid and tin oxide catalyst, for the esterification reaction of Eckey, while further optimizing applicant's result-effective variables. Absent any showing of unusual and/or unexpected results over applicant's particular catalyst and process steps, the art obtains the same effect on the esterification of benzoic acid and its esters. The expected result would be an efficient synthesis of benzoic acid ester for the cosmetic industry.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer Y. Cho whose telephone number is (571) 272 6246. The examiner can normally be reached on 9 AM - 6 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yvonne Eyler can be reached on (571) 272 0871. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

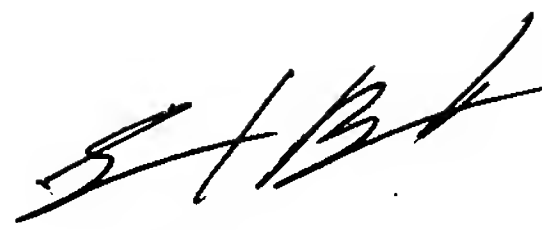
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Jennifer Cho  
Patent Examiner  
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*FOR*

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Yvonne Eyler  
Supervisory Patent Examiner  
Technology Center 1600